



ALIST Issues To Be Resolved for NSTX

(prior to decision to proceed)

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Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
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Outline

- **This list was compiled from discussions at previous PFC meetings and with NSTX personnel**
- **Input on additional issues is encouraged and welcomed**



Draft Task List

Task	Status	Responsible Party
Confirm H pumping capability of liquid Li	Done no problem	UCSD, UIUC
Measure He pumping capability of liquid Li	Started preliminary results promising	UIUC
Conduct MHD experiments with open channel flow (Ga alloy)	Good progress on MTOR	UCLA
Conduct MHD Experiments with free surface jets (Li)	First experiment complete; second phase in design (done by Dec 04?)	SNL
Confirm heat removal capability of liquid Li	Not Started	SNL



Draft Task List

Task	Status	Responsible Party
Develop MHD computational models for free surface flow	Progress, some open channel flows have been modeled	UCLA/Hypercomp
Develop EM Flow meter	Done	SNL
Find suitable pumps and valves for liquid Li flow	Partially complete, finish in <6 mo.	SNL
Use MHD modeling to predict NSTX conditions	Not started	UCLA/Hypercomp
Decide on flow configuration for NSTX	Not started depends on modeling above	SNL/UCLA/PPPL + ...



Draft Task List

Task	Status	Responsible Party
Design flow system for NSTX	Concept created but known problems exist	ORNL (?), SNL (?) WHO!
Conduct modeling of selected design	Not started	Hypercomp (?)
Design reviews	Not started	?
Procurement	Not started	?
System Assembly and testing	Not started	SNL, PPPL, + ...



Draft Task List

Task	Status	Responsible Party
Conduct experiments on NSTX	Not started	?